

SUMMARY

Project Number:	HOME/2014/ISFP/AG/ENFS/4000007822
Title:	Towards the Development of Pan-European Databases in Forensic Science (TDPEDFS)
Implementation Period:	1st January 2016 - 31st May 2018
Beneficiaries <ul style="list-style-type: none">• European Institute of Forensic Science Institutes (ENFSI) - COORDINATOR• Central Anticrime Directorate of the Italian National Police, Forensic Science Police Service (DAC-SPS-Rome) IT• Estonian Forensic Science Institute (EFSI-Tallinn) EE• Federal Criminal Police Office, Forensic Science Institute (BKA-Wiesbaden) DE• Forensic Science Centre "Ivan Vucetic" (FSC-Zagreb) HR• Forensic Science Ireland (FSI-Dublin) IE• Forensic Science Laboratories of Carabinieri Force (RaCIS-Rome) IT• Forensic Sciences Institute of the French Gendarmerie (FSIFG -Rosny Sous Bois) FR• Institute for Forensic Sciences (IFS-Budapest) HU• Institute of Criminalistics (ICP-Prague) CZ• Landeskriminalamt Baden-Württemberg, Forensic Science Institute (LKA-Stuttgart) DE• Landeskriminalamt Berlin, Forensic Science Institute (LKA-Berlin) DE• Landeskriminalamt Northrhine-Westfalia - Department of Forensic Science (LKA-Dusseldorf) DE• National Bureau of Investigation Forensic Laboratory (NBIFL) (NBIFL-Vantaa) FI• National Forensic Science Institute (INPS-Ecully) FR• National Forensics Centre (NFC-Linkoping) SE• National Institute of Criminalistics and Criminology (INCC-Brussels) BE• Netherlands Forensic Institute (NFI-The Hague) NL• State Forensic Science Bureau (SFSB-Riga) LV	

Activities and Results

The project has delivered results across several areas:

1. A feasibility study has been conducted on the future possibilities for exchanging forensic information through shared DBs and the potential scope for Big Forensic Data. This work has included a Big Data Conference. This activity has included a survey of existing European forensic DBs and the evaluation of different technological approaches for data sharing along with the development of a pilot demonstrator, FOXX (**F**orensic **O**bjects **E**Xtensible and **E**Xchangeable). This framework was designed for maximum flexibility, with local data models that can be harmonized into global European models. Innovative techniques empower laboratories to create or modify local DBs. The feasibility assessment has been guided by work across many areas: technical, legal, user requirements, financial, organisational, security, geographical mapping and wiki support.
2. New DBs have been developed across 2 related forensic disciplines, firearms and gunshot residues (GSR). The first has gunshot residue prevalence data for different populations/places across the EU to help understand the significance of detected traces. A second DB has collected spectral information from typical GSR particles arising from specific ammunition brands. A third DB allows geographic/date searches for technical firearm and ammunition information. Also, a collaborative exercise (CE) has led to a Best Practice Manual on the measurement of land engraved areas on bullets.
3. Secure cash transit/storage boxes mark banknotes with indelible inks and specific unique taggants on tampering. Criminals are unable to use the stained notes and specific forensic links are established. 5 forensic institutes have cooperated with EURICPA (European Intelligent Cash Protection Association), an association representing leading manufacturers to develop a new DB, EuSISS+ (European Smoke and Ink Staining System Plus) that can identify international links between stained notes and specific attacks/robberies. The server is hosted in

France with links across the sTESTA network. Other work has included a one day training seminar and two CEs involving stained notes.

4. A DB (Forensic Substance DB on Explosives, FoSDE) has been developed with data from commercial and military explosives previously not available, designed for the investigation of crime and terrorism. The data content has been prioritized by FINEX (ENFSI Working Group on Explosives). The data includes photographs of the substances and their packaging and extensive validated analytical information including, IR Spectra, XRD/XRF & LC-MS.
5. This activity has involved the combination of various existing DBs in the field of forensic document examination. The platform (on-line through a VPN connection) provides a tool for examiners to access a common information pool allowing one query to combine examination methods. 7 DBs are on the platform: Inkjet, Toner, Pen Blue, Pen Black, Pen Other colours, Printing Defects and Printing Techniques.

The impact of the TDPEDFS project will spread well beyond the forensic community to include all those with an interest in the delivery of justice across the EU (police, judges, lawyers, public).